

Serial No: 10/731,167

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REMARKS**BEST AVAILABLE COPY**

Claims 1-5, 9-17 and 20 are pending in the current Application. Claim 1 has been amended to include the subject matter of claim 8, which has now been canceled. Support for "non-aromatic" in claim 1 can also be found on page 12, line 9 of the current Application. New claim 20 has also been added. Claims 2, 3 and 5 have also been amended to put in proper form for dependency from newly amended claim 1. Claims 6 and 7 have been canceled. Also Figure 1 has been amended, with replacement drawing included, to label the figure "Figure 1" as suggested by the Examiner.

The Examiner rejected claims 1-6, 10-17 under 35 USC §102(b) as being anticipated by **Wulff-Döring et al.** (US 6,034,029). Anticipation under §102 can be found only if a reference shows exactly what is claimed.<sup>2</sup> The identical invention must be shown in as complete detail as is contained in the patent claim.<sup>3</sup>

It is the Examiner's position that **Wulff-Döring et al.** teaches a monoclinic zirconium dioxide having a large surface area. It should be noted that the Examiner has not rejected claim 8 based on the **Wulff-Döring et al.** reference. Therefore, amended claim 1, having subject matter from claim 8, now obviates the rejection based on this reference.

The Examiner also rejected claims 1-17 under 35 USC §102(b) as being anticipated by **Toussaint et al.** (US 5,037,793) and claims 1-12, 14, 16 and 17 under 35 USC §102(b) as being anticipated by **Toussaint et al.** (US 5,015,788). It is the Examiner's position that the '793 and '788 references disclose a catalyst which can be prepared using up to 50% of solid zirconium dioxide, and therefore is also monoclinic, tetragonal and/or cubic zirconium dioxide.

Both the '793 and '788 references describe the preparation of catalysts by precipitation of salts, but also by precipitation onto solid zirconium dioxide.<sup>4</sup> However, neither reference discloses cobalt as a catalytically active component of the catalyst and do not disclose specific modifications of solid ZrO<sub>2</sub>. Amended claim 1 of the current invention requires "from 15 to 50% by weight of oxygen-containing compounds of

<sup>2</sup> **Titanium Metals Corp. v. Banner**, 778 F.2d 775, 227 USPQ 773 (CAFC 1985).

<sup>3</sup> **Richardson v. Suzuki Motor co.**, 868 F.2d 1226, 9 USPQ2d 1251, 9 USPQ2d 1913 (CAFC 1989).

<sup>4</sup> '788 column 2, lines 30-32 and '793 column 2, lines 30-33.

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cobalt, calculated as CoO." Therefore the current claims are not identically disclosed by the cited references. In light of these amendments and remarks, the Applicants request that the §102 rejections be withdrawn.

The Examiner additionally rejected claims 1-17 under 35 USC §112, first paragraph, because the specification does not provide enablement. It is the Examiner's position that the specification does not provide enablement for the reduction of the universe of aliphatically unsaturated groups using catalysts whose preparation has involved precipitation of catalytically active compounds onto monolithic, tetragonal or cubic zirconium dioxide. The Examiner believes that the specification only enables with regard to amination of aliphatic aldehydes.

Enablement under 35 USC §112 requires that the specification describe the invention in such terms that one skilled in the art can make and use the claimed invention. The test is whether a person skilled in the art can make and use the invention without undue experimentation.<sup>5</sup> It is not necessary that the specification describes in such detail that it enable one skilled in the art to make and use a perfected, commercially viable embodiment of the invention.<sup>6</sup> Some of the factors for consideration in an enablement analysis include : a) the breadth of claims b) the nature of the invention c) the state of the prior art d) the level of one of ordinary skill e) the level of predictability in the art f) the amount of direction provided by the inventor, g) the existence of working examples and h) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.<sup>7</sup>

The Examiner would like to limit enablement only to hydrogenative amination of aliphatic aldehydes, however, the Application supports a much broader group of compounds. For Example, the Application on page 6, lines 9-11 states that the non-aromatic groups in the organic compound used in the currently claimed process can be an aliphatic CC double bond or CN double bond, an aliphatic CC triple bond or CN triple bond or an aldehyde group or keto group. As can be seen this is much broader than merely aldehydes. Additionally, as stated on page 12 of the present Application, "Organic compounds having aliphatically unsaturated groups which can be used in the

<sup>5</sup> MPEP §2164.01

<sup>6</sup> MPEP §2164

<sup>7</sup> In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)

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process of the present invention include virtually all compounds having one or more aliphatic (i.e. nonaromatic) unsaturated CC or CN or CO bonds...".<sup>8</sup>

Furthermore the Application gives a working example of the current claims on pages 15-17. In view of such an example and the specification as well as what is already known in the art, one of ordinary skill would be well equipped to carry out the process with other non-aromatic compounds.

Additionally, hydrogenation with use of zirconium oxide is known in the art. For example, the '793 reference teaches a catalyst for the hydrogenation of unsaturated aliphatic compounds. Such a disclosure is broad.

While breadth is a factor to be considered by In re Wands, 858 F.2d 731, 8 USPQ2d 1400 (CAFC 1988), if one of ordinary skill in the art would know how to make and use the large group of compounds a claim with such subject matter would be enabled. In the case at hand, one of ordinary skill in the art would be well informed by the disclosure in the Application, the working example in the Application, and what is already known in the art. Such one of ordinary skill in the art would therefore be able to make and use the current invention without undue experimentation.

The Examiner also rejected claims 1 and 13-17 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as their invention. The Examiner argued that the term "aliphatic" is unclear because Applicants have defined the term to include multiple bonds to nitrogen and oxygen. Applicants have therefore amended claim 1 to recite "non-aromatic" in the place of "aliphatic". Support for such an amendment can be found on page 12, line 9 of the current Application.

Regarding claim 5, it is the Examiner's position that there is no basis for a mixture of catalytic metals. Claim 5 depends from claim 2, wherein metals can be selected from transition groups VIII and IB of the periodic table. Therefore antecedent basis is provided for claim 5 in claims 2. Furthermore, the Applicants have amended claims 9 to recite proper antecedent basis. Favorable action is therefore solicited.

In light of the foregoing remarks, the Applicants request that the §102 and §112 rejections be withdrawn.

<sup>8</sup> Application, page 12, lines 7-13.

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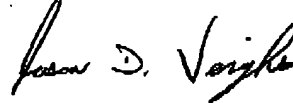
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Respectfully submitted,  
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